

REMARKS

The Information Disclosure Statement filed June 4, 2001 is re-submitted in compliance with 37 C.F.R. 1.98(a)(2) with legible copies of each of the references cited therein. Acceptance and consideration of these disclosures is respectfully requested.

Formal drawings were submitted on March 24, 2003, in connection with the Applicant's response to the Restriction Requirement. Acceptance and entry of the formal drawings is respectfully requested.

Claims 1-7 are identical to claims 22-28 and must have been duplicated accidentally. Thus, the examiner's point in paragraph 4 on double patenting is valid and well-taken and claims 1-7 are cancelled without prejudice or disclaimer. The claim rejections under 35 U.S.C. 112 are addressed by the cancellation of claim 1.

Claims 1-7 (cancelled as per above) and claims 22-34 have been rejected under 35 U.S.C. §103(a) as unpatentable over Anderson et al. US 2002/0063818 and Abileah, U.S. Patent No. 6,359,671. It is respectfully submitted that the Anderson publication is not prior art to the present application, at least under the provisions of 35 U.S.C. §103(c) as it was, at the time the invention of the present application was made, owned by the same corporate person, Hana Microdisplay Technologies, Inc. ("Hana"), and subject to an obligation of assignment to Hana as is the present application. Copies of both assignments to Hana are enclosed herewith. Withdrawal of the rejections of the claims based upon the Anderson publication is therefore respectfully requested.

Notwithstanding the non-prior art status of the Anderson publication, the disclosure therein of a $\frac{1}{4}$ wave retarder with a polarizer is to make a circular polarizer for the creating an isotropic polarizing element and is limited to this effect. In the present application, the retarder is used to compensate for the liquid crystal cell, which, although appearing similar, is using the retarder for a different effect. The value of the retarder is also different in the present application.

Also, the examiner notes that "Anderson does not explicitly disclose that the liquid crystal cell is a twisted nematic type . . .". This is because in Anderson et al., the liquid crystal cell is specifically NOT a twisted nematic type. It is a vertically aligned, untwisted nematic type. Thus, the invention as claimed in this application is not suggested by the Anderson publication but rather contra-indicated.

The disclosure of Abileah by itself does not anticipate or make obvious claims 22-34 of the present application. As noted by the Examiner, Abileah does not teach or suggest the use of a twisted nematic type liquid crystal cell or use of a color filter, as defined by claim 22. Furthermore, the retarders used in Abileah are substantially different than the retarders used in the invention of the present application. Every description in Abileah uses a retarder that is tilted and has a "tilt angle θ [which] varies through the thickness of the layer" (See, e.g., column 22, line 34).

The Examiner notes that Anderson discloses a LCoS cell with off-axis light, and that Abileah discloses various twist angles of the cell. Although it is known to make an off-axis LCoS device using a twisted nematic LC cell, this combination alone does not suggest or make obvious the novel compensation system of the invention of matching the polarization axes on incoming and outgoing light to enhance the contrast ratio of the display.

The examiner also notes that "although Anderson discloses quarter wave plates (retarder) plates, Anderson does not explicitly go into the retardation values and the retardation angles for these plates." The specification that the plates are quarter wave plates specifies the retardation angle, if the wavelength is known. For example, for green light (~ 510 nm), this plate would have roughly $510/4 = 127.5$ nm retardation. See claim 31. Anderson discloses that this quarter wave plate is used in conjunction with a linear polarizer to make a circular polarizer, and that to accomplish this it is known that the angle of the retarder to the polarizer must be 45 degrees.

The examiner also notes that "Abileah on the other hand, discloses the various retardation values and the angles for the plates at various wavelength regions." However, as discussed above, the retardation films disclosed by Abileah are of substantially different type than employed in this patent application, having varying optical axis as opposed to the present invention which uses in one embodiment films with uniform optical axis.

CONCLUSION

In view of the foregoing, it is respectfully submitted that all claims are patentably distinct over the art of record and in condition for allowance thereof. If the Examiner believes there are any further matters, which need to be discussed in order to expedite the prosecution of the present application, the Examiner is invited to contact the undersigned.

If there are any other fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0959, referencing our Docket No. 109784.0002.

Respectfully submitted,
ROETZEL & ANDRESS

JULY 30, 2003

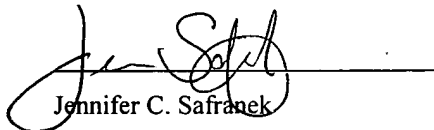
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MAIL CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this correspondence (along with any other paper referred to as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450



Jennifer C. Safranek

(Typed or Printed Name of Person Mailing Paper)

Date: 7.30.03